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(54) Title: USE OF SYNERGISTIC BACTERIOPHAGE LYTIC ENZYMES FOR PREVENTION AND TREATMENT OF BACTERIAL INFECTIONS

(57) Abstract: Methods for treating and preventing bacterial infections are described using at least two lytic enzymes obtained from a bacteriophage isolated from Streptococci. Two of these enzymes, Pal and Cpl-1, showed synergy when tested for cleavage of peptidoglycan in the cell walls of *Streptococcus pneumoniae*. Moreover, the combination of these two enzymes resulted in killing of both penicillin sensitive as well as penicillin resistant strains of *S. pneumoniae*. The synergy displayed by the combined use of these two enzymes may establish a means for identification of agents that mimic or enhance this activity and may lead to the identification of new antimicrobial agents and pharmaceutical compositions useful for treating and preventing a variety of bacterial infections in mammals. Further compositions are described for disinfecting or sanitizing porous and non-porous surfaces suspected of harboring infectious organisms.